LEDONARDO 2

USER MANUAL

BROTHER, BROTHER & SONS ApS

INTRO

Brother, Brother & Sons ApS
The information in this manual is subject to change without notice.
Go to www.brothers-sons.dk for the latest version.
Brother, Brother & Sons ApS assumes no responsibility for any errors or inaccuracies that may appear in this manual. All information and graphics are the property of Brother, Brother & Sons ApS.

User Manual Version: December 2011

Customer and Warranty service:
Contact your regional dealer. Contact information for your area can be found at www.brothers-sons.dk

RMA:
When returning an item please enclose
a.: Model and Serial number.
b.: A description of the problem
c.: The name of the owner of the equipment.
d.: If available please include a copy of your invoice to establish the date of sale and the beginning of the warranty period.

Disposing of this product:
Help preserve the environment! Ensure that this product is recycled at the end of its life.
This product is in compliance with the RoHS and WEEE directives.

CE

In compliance with EMC standards:
EN 55103-1 & EN 55103-2:
EN 55022, EN 55103-1 Annex A, EN 55022, EN 61000-3-2, EN 61000-3-3, EN 55103-1 EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 55103-1 Annex B, EN 55103-1 Annex A, EN 61000-4-11

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SAFETY

Safety Notice:
It is important to read ALL safety information and instructions in this manual before installing and operating the product described.
Safety symbol used in this manual:

WARNING: Potential injury or damage to persons or product.

WARNING:
It is important to read ALL safety and installation instructions to avoid any damage to the product and potential injury to yourself and others.
This product is for professional use only and has been designed for indoor use. Exposure to moisture may cause damage to the product and will void your warranty.
This fixture is designed for use with a specific LED only. Use of any other type LED may be hazardous and may void warranty.
Do not operate the product if the ambient temperature exceeds 35°C / 95°F
Provide a minimum clearance of 0,1m (4 in.) around fans and air vents.
Do not mount on flammable surface.
Ensure that the fixture is electrically connected to ground (earth)
Only use this product if all cables, connectors and the product itself are undamaged.
Damage caused by inadequate cleaning or maintenance is not covered by the product warranty.
This is a product using High power LEDs. Do not stare directly into the LED at extended periods of time at a short distance without suitable protective eyewear. Do not look directly at the LED with optical instruments that concentrate the light output.
No matter the light source, blue light, depending on the wavelength, can be harmful to your eyes.

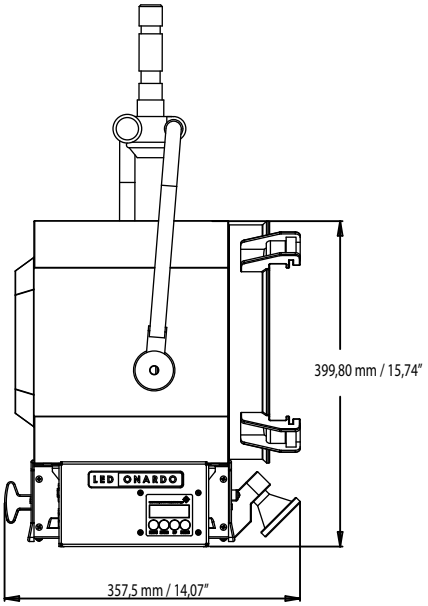
SERVICE:
Servicing is to be performed only by qualified personnel. Take precautions to avoid ESD damage during service.
Disconnect the power before servicing the product.

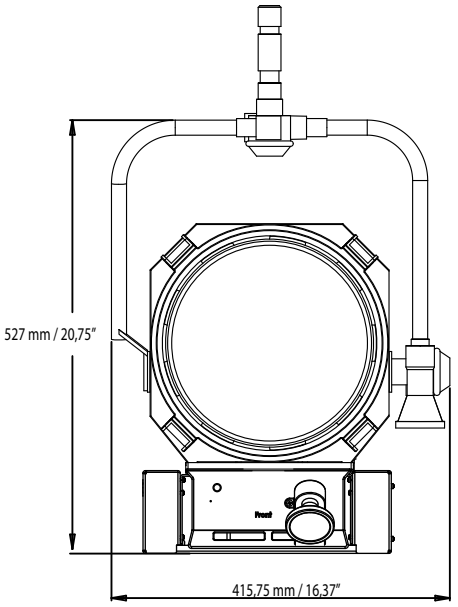
MAINTENANCE:
This product requires very little routine maintenance, if any, but has special cleaning instructions:

Disconnect fixture from power and allow it to cool for 10 min.
Vacuum or gently blow away any dust from fan blades and grills
Very gently clean the LED with Isopropyl alcohol.
Clean the lenses with a soft damp cloth.

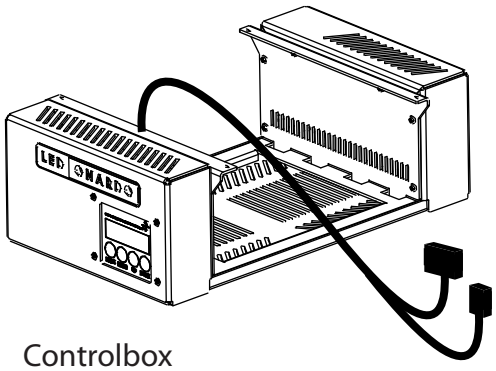
Power:
Never connect to dimmer power

PRODUCT OVERVIEW

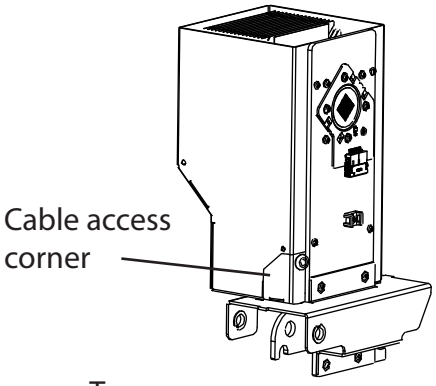




LEDonardo 2 - LED Light Engine



Controlbox



Tower

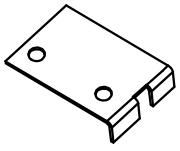
6 x washers

6 x Philips PH2 Screws

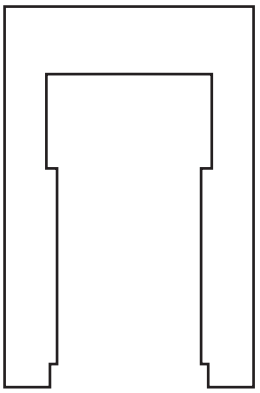
2 x Cable Ties

Safety Sticker

Cable Strain Relief



Air cover

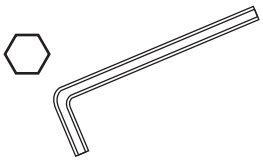


RETROFITTING

CAUTION !!
To avoid damage to equipment take electrostatic precautions when performing the conversion
Disconnect fixture from power and allow it to cool for 10 min.
Conversion should only be performed by qualified personel.

Tools needed to perform the conversion:

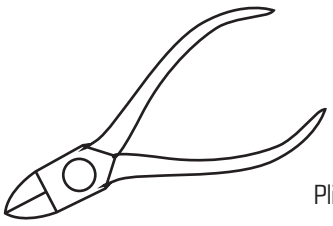
Phillips PH2 screwdriver



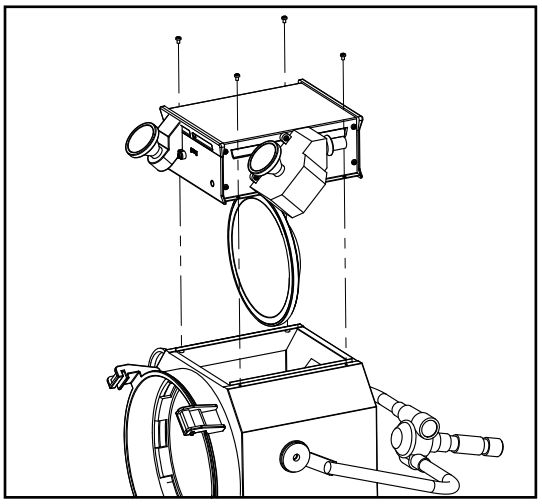
Allen/Umbraco key size 4

Torx srewdriver size T10

Slotted srewdriver size 3,5 - 4

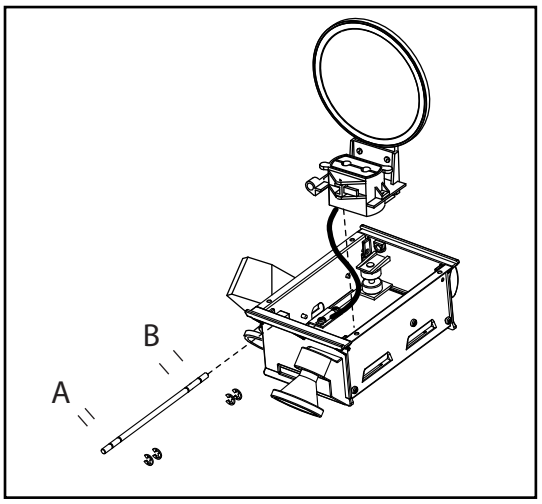


Pliers for cable ties



1

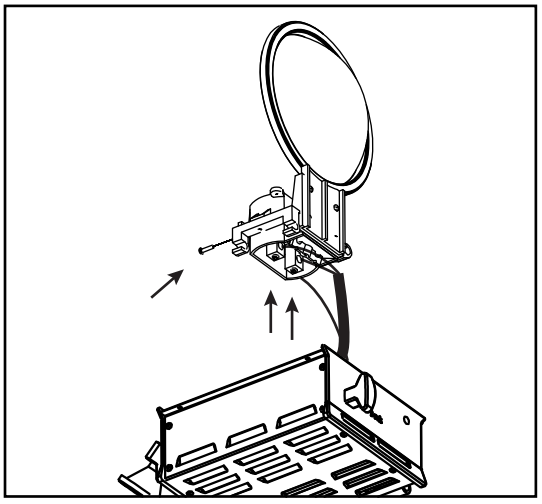
Unscrew the four screws as illustrated and remove the lamp section.



2

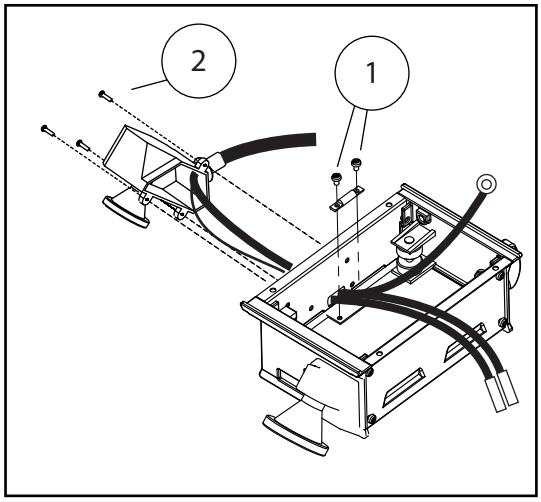
NOTE:
The guide bar is not symmetrical, so it is recommended to mark one end, to make sure that you remount it correctly.
Not doing so will affect the optical system.
As a rule the distance between the locking rings is smaller at the front (A) and larger in the back (B).

Using a screwdriver, remove the four locking rings on the guide bar.
Slide the guide bar out and lift up the lampsocket / reflector part. **Be carefull not to loose the locking rings as you will need them later.**



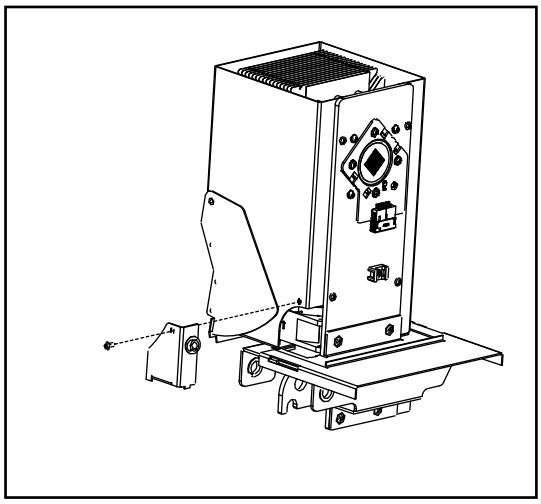
3

With the lamp socket lifted, loosen the two Umbaco screws and remove the cable from the socket.
Loosen the ground wire by removing the screw.
The socket is no longer needed and we are ready to start mounting the LED Light Engine.



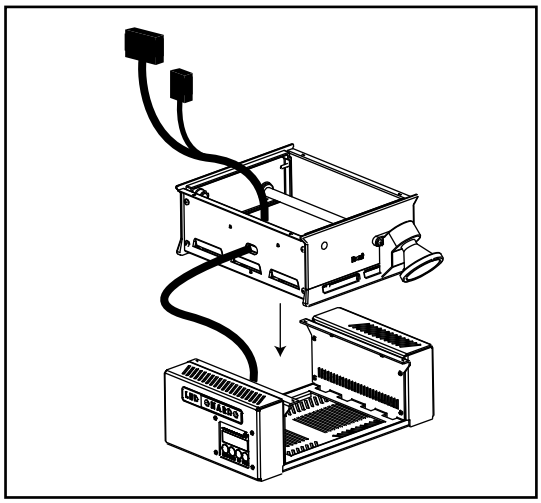
4

1. Remove the two screws holding the cable strain relief.
2. Unscrew the three screws holding the on/off switch box.
3. Remove the on/off box and the cables including all ground wires.



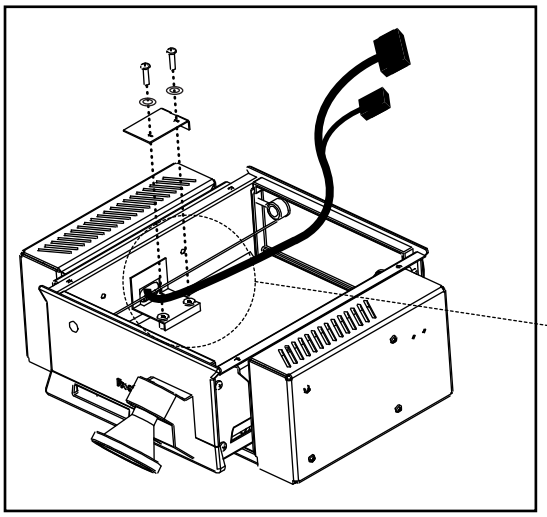
5

1. Remove the cable access corner on the Tower by unscrewing the Torx 10 screw, save the screw as you will need it later.



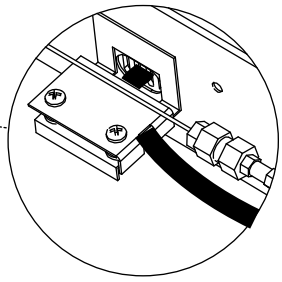
6

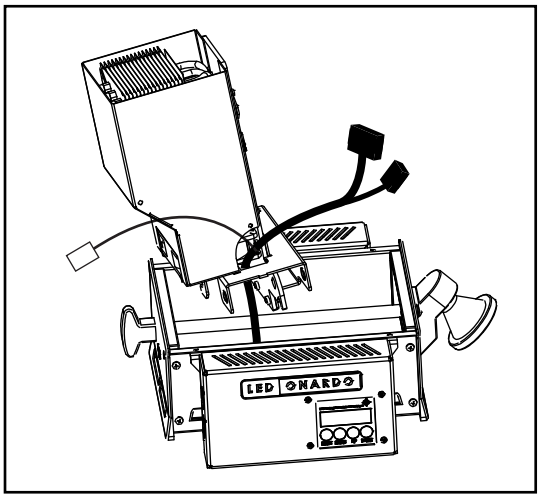
1. Feed the cables from the Controlbox through the cable hole in the old lamp housing.
2. Lower the old housing onto the controlbox



7

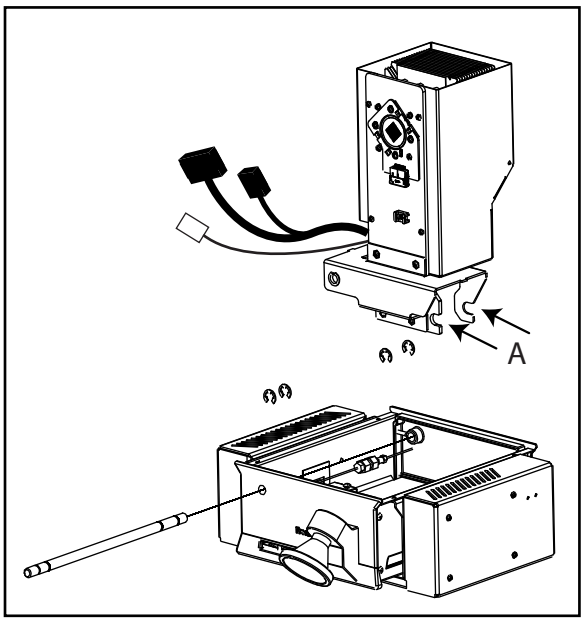
1. Mount the supplied cable strain relief with the supplied screws and washers, and guide the cable through as illustrated.





8

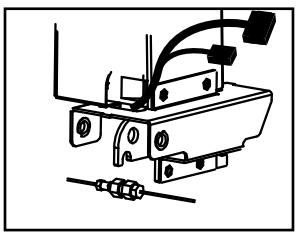
1. Feed the cable through the Tower as shown.

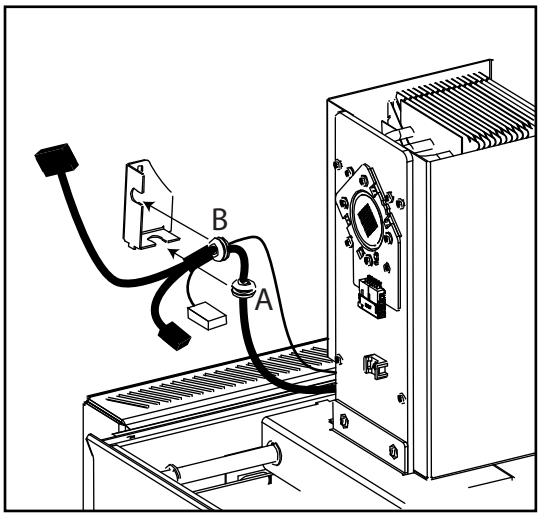


9

1. Place the Tower in the old housing by first hooking it on to the the unmounted guidebar using the two nothes A.
2. Lower the notch on the opposite side into the wirepulley (see the illustration below)
3. Insert the guidebar that we previously dismounted and apply the four locking rings again. Remember the orientation of the guidebar ,(short distance at front, large distance in the back).

NOTE: The cable has been partly removed from the illustration to prevent it from obscuring the view.

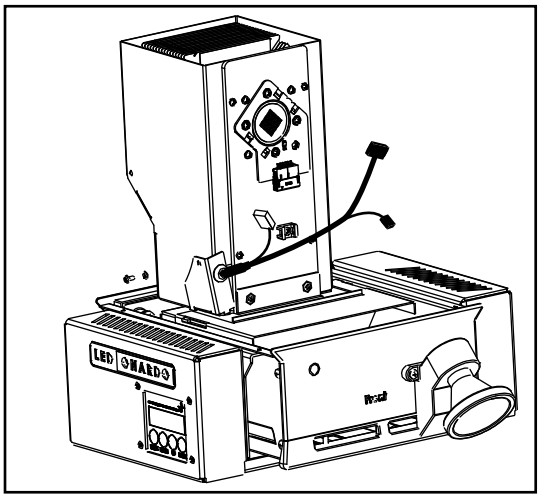




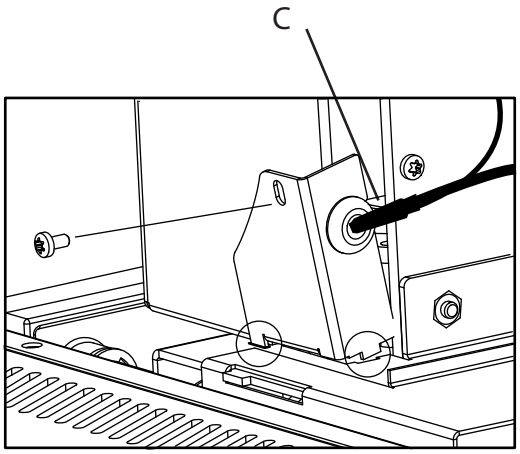
10

1. In this step we need to guide the cables from the Controlbox through the Cable access corner.
   First attach grommit A, mounted, on the cable to the slot shown in the illustration. Next take the open grommit B from the cable access corner and guide both the cable from the Controlbox and the Tower fan through.

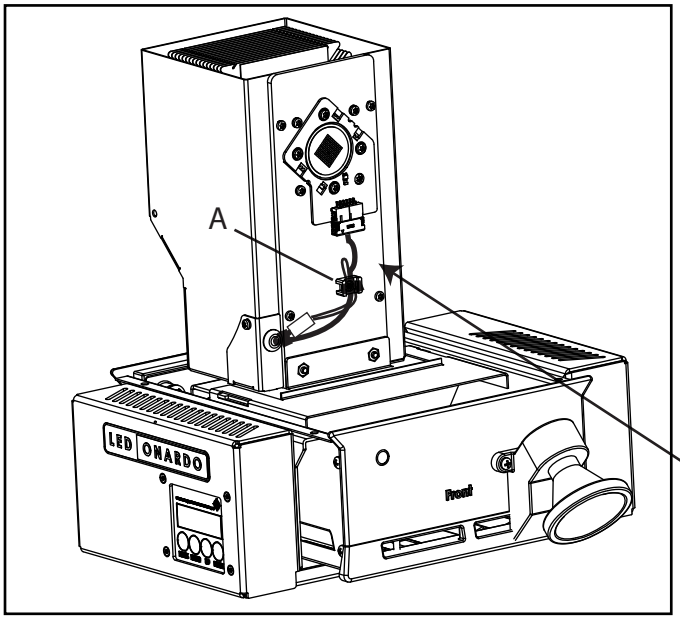
NOTE: The LED cable has a piece of heatshrink (C) mounted where the cable tube stops. This needs to be on the LED side of the grommit.



11



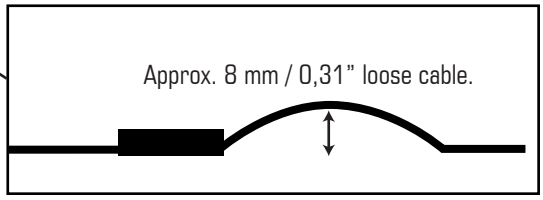
1. Mount the cable access corner with the Torx 10 screw.
   When mounting, angle the corner as shown, to fit the notch on the corner into the cutout in the Controlbox.

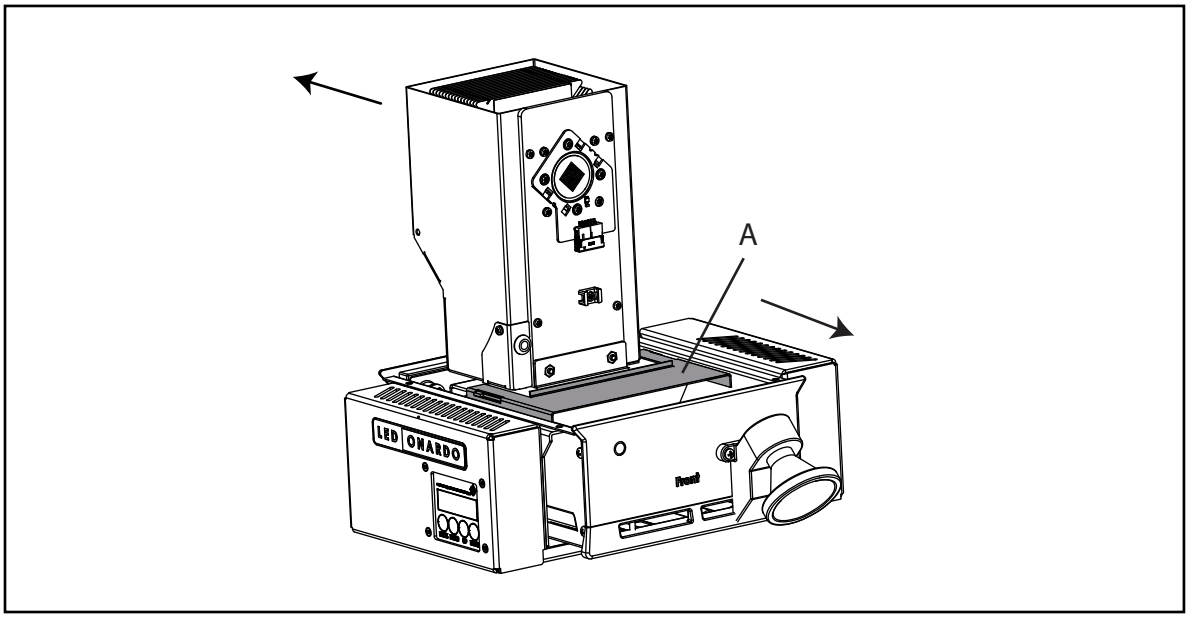


12

1. Now gently pull the cable from the Tower fan out to tighten it.
2. Connect the LED cable and the two fancable ends.
3. Using the two supplied cable ties and the cable tie fastener (A), tie down the cables to prevent them from getting in front of the LED.
   If possible, leave a small amount of excess cable on the LED side of the cable tie fastener.

This will make it easier, should you need to replace the LED.

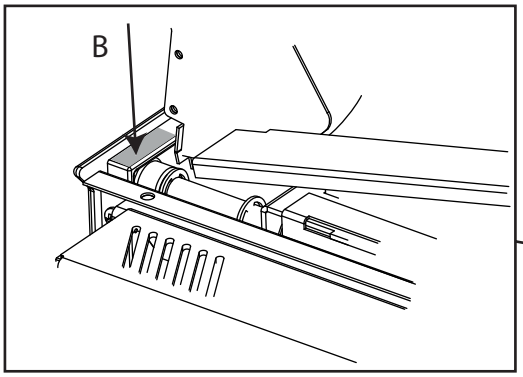


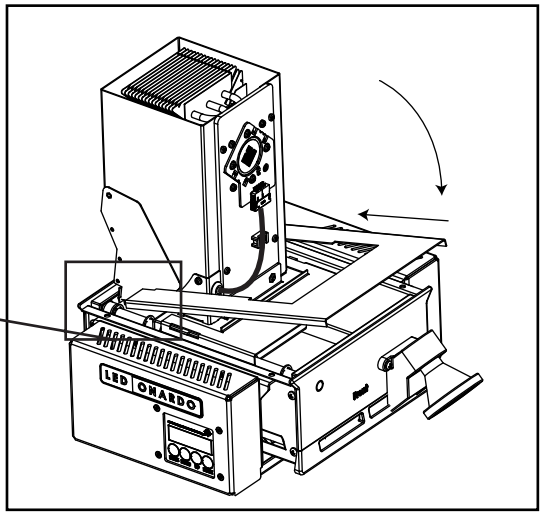


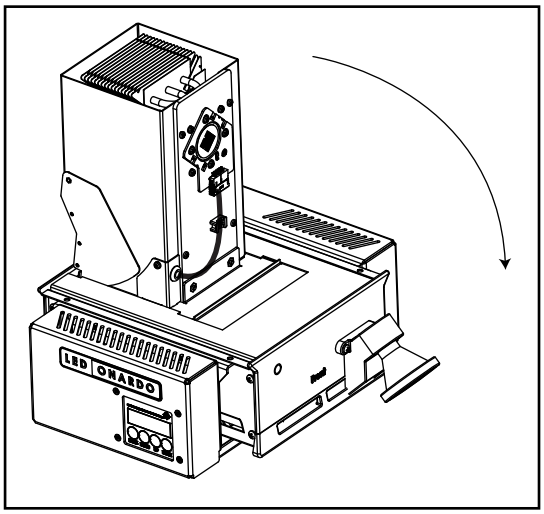
13

1. Move the Tower all the way to the back
2. Pull the sliding lid (A) towards the front.

Now its time to mount the Air cover.
Slide it in from the front, making sure that it rests on top of the edge (B) above the Guide bar.

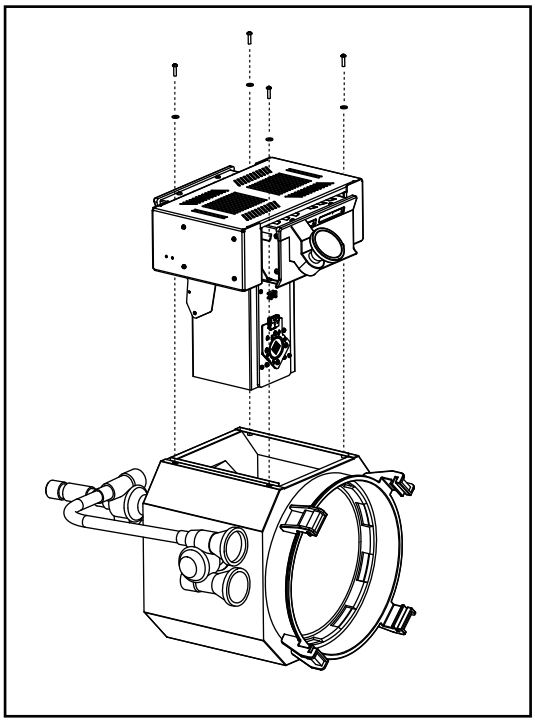






14

1. Carefully turn everything you have assembled up side down. Remember that the sections are not attached to each other securely yet.



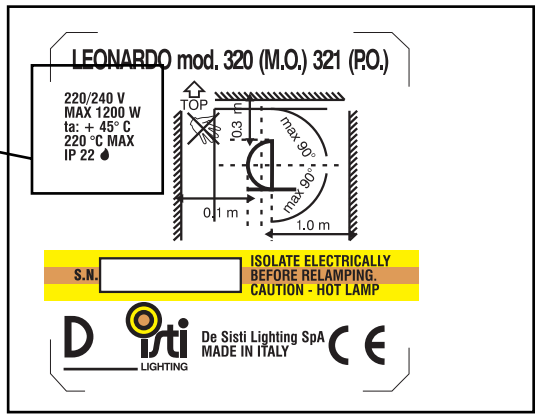
15

1.
Place all the parts on bottom of the housing.
Screw in the four supplied screws and washers.
Now everything is attached securely.

16

1. Cover this area of the tech label on the back of the Desisti with the supplied BBS sticker, for approval purposes.

220/240 V
MAX 1200 W
ta: + 45° C
220 °C MAX
IP 22



INSTALLATION

Do not operate the product if the ambient temperature exceeds 35° C

Provide a minimum clearance of 0,1m (4 in.) around fans and air vents.

This fixture must be connected to ground.
This fixture is for indoor use only.

Remove plastic protection from the LED before applying power !

Read the "Safety" and "Specifications" chapters first.

Applying power:

Never connect to dimmer power

Make sure the local power voltage is within the range specified.
If so; connect the power cable and turn the power on.

Standalone operation:

Using the navigation buttons and display readout (refer to the "Software Menu" chapter) navigate to Manual and set the desired intensity.
(additional operations see "Software Menu" chapter)

DMX operation:

Connect a DMX cable

Navigate to Adress mode (Addr) and set the desired adress, resolution, response, strobe, curve settings and in Personality (PErS) set the desired Fan, No DMX and Display settings.
(refer to the "Software Menu" and "DMX Protocol" chapters)

Connect to DMX controller.
(refer to the "DMX Protocol" chapter)

Use it.

AC Power

This fixture must be connected to ground.
Electrical:
AC Power: 100 – 240 V nominal, 50/60 Hz
Powersupply: Electronic switchmode
Max power consumption: 182 w

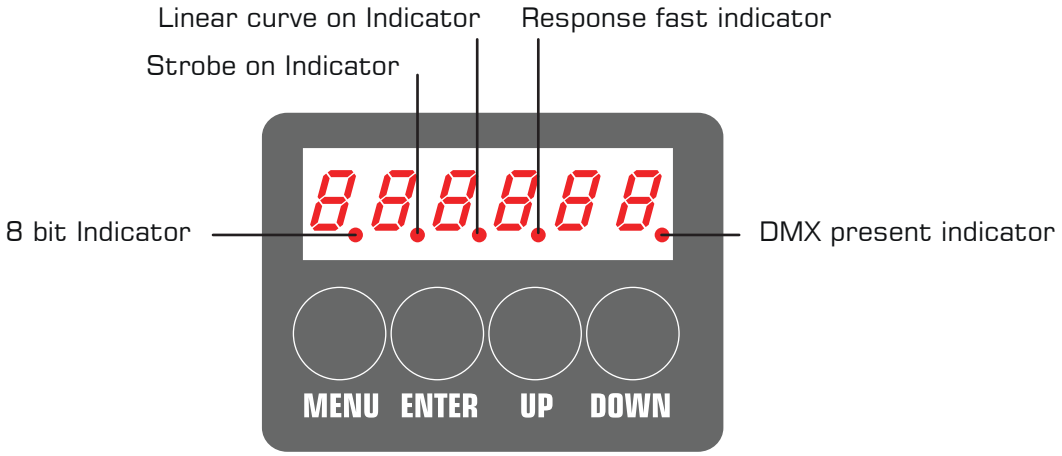
DMX Data link

This product uses a 5-pin XLR for dmx input and output.
Use a shielded data cables.
Do not overload the daisy chain. Up to a maximum of 32 devices can be used on a single dmx chain.

DMX Channels:
1 at 8bit: Dimmer
2 at 8bit: Dimmer w. strobe
2 at 16bit: Dimmer
3 at 16bit: Dimmer w. strobe
Protocol: USITT DMX512-A

SOFTWARE UPDATE

Software can be updated via DMX512 with UPLOADER from Brother, Brother & Sons ApS and the latest software version can be found on www.brothers-sons.dk.



MENU	Open menu / Go back
ENTER	Select / Confirm
UP	Scrolling UP / Increase value
DOWN	Scrolling DOWN / Decrease value

DMX Channels

Mode	Channel	Parameter	Value	Percent	Function
8 Bit	1	Dimmer	0 - 255	0 - 100	Coarse dimming
8 Bit w. Strobe	1	Dimmer	0 - 255	0 - 100	Coarse Dimming
	2	Strobe mode	0 - 5	0	Open
			6 - 125	1 - 49	Slow to Fast Strobe
			126 - 130	50	Open
			131 - 250	51 - 99	Slow to Fast Random
			251 - 255	100	Open
	3	Strobe length	0	0 - 100	Short to Long Flash
16 Bit	1	Dimmer	0 - 255	0 - 100	Coarse dimming
	2	Dimmer	0 - 255	0 - 100	Fine dimming
16 Bit w. Strobe	1	Dimmer	0 - 255	0 - 100	Coarse dimming
	2	Dimmer	0 - 255	0 - 100	Fine dimming
	3	Strobe mode	0 - 5	0	Open
			6 - 125	1 - 49	Slow to Fast Strobe
			126 - 130	50	Open
			131 - 250	51 - 99	Slow to Fast Random
			251 - 255	100	Open
	3	Strobe length	0	0 - 100	Short to Long Flash

Note: Beware, when using Strobe Lenght, that if the Strobe Lenght is egual to or longer than the flash and interval between flashes, the unit will not strobe.
If maximum strobe length is used the fastest strobe possible will be 17 (7%)

SOFTWARE MENU

Default values indicated by **bold** font

Addr Addr	1		DMX adress value **1** - 512
Mode ModE	Resolution rESoLu		8 bit resolution **16 bit resolution**
	Response rESPon	SLoU FASt	**Slow** (fade between values) Fast (snap between values)
	Strobe StrobE	oFF on	**OFF** On - (adds 2 strobe channels)
	Curve CurVE	SQuArE LInEAr	**Square** dimmer curve Linear dimmer curve
	Fan FAn	HIGH Lo	**HIGH** - No fan speed limit LOW - Fan speed limited (Silent)
	noDMX no dMX	HoLd oFF MAn	*Action when loss of DMX signal:* **HOLD** - last received DMX value OFF - Sets output to zero MAN - Go to Manual DMX value
	Display dISP	oFF 2n on	**OFF 2n** - Display off after 2 minutes ON - Display always on
Tools toolS	Ver VEr		Shows software version - *READOUT ONLY*
	HW Ver HW VEr		Shows hardware version - *READOUT ONLY*
	Temp tEmP		LED temperature - *READOUT ONLY*
	DMX In dMX In		3 first digits shows DMX adress - *READOUT ONLY* 3 last digits shows DMX value - *READOUT ONLY*
	Reset rESEt	ConFIr	Confirm (Reset unit by pressing enter)
	test Fan tStFAn		Fan test First 2 digits - set fan speed level 0 - 31 Last 3 digits - RPS (rounds per second) - *READOUT ONLY*
	test display tStdSP		Display test - all seven segments of each digit on - *READOUT ONLY*

....continues on next page

SOFTWARE MENU ....continued

Default values indicated by **bold** font

Log LoG	nAHFAn	Max Fan	Maximum fan speed logged. (in RPS) - *READOUT ONLY*
	FAnrPS	Fan RPS	Current fan speed (in RPS) - *READOUT ONLY*
	EEProM	EEProm	Developer info
	LEd U	LED U	LED voltage in Volts - *READOUT ONLY*
	PSu U	PSU U	PSU voltage in Volts - *READOUT ONLY*
	LEdInt	LED int	for troubleshooting - *READOUT ONLY*
	LoG C°	Log C°	Minimum and maximum logged temperature in °C UP and DOWN scrolls min. and max.
	ontIME	on time	PSU on time in hours - *READOUT ONLY*
	on LEd	on LED	LED on time in hours - *READOUT ONLY*
	dEMo	Demo	Developer info
	dMH H2	DMX HZ	DMX refresh rate - *READOUT ONLY*
	dMH CH	DMX CH	No. of DMX ch. transmitted by controller. - *READOUT ONLY*
	dMH br	DMX br	Break lenght of DMX in microseconds - *READOUT ONLY*
	LEd EE	LED EE	Developer info

Manual MAnuAL	0	Manual intensity **0** - 100% Intensity saved when pressing ENTER (Display is always on in manual mode)

SPECIFICATIONS

Physical:
Depth: 357,5 mm / 14,07" (additional depth when mounted 0 mm / 0")
Width: 415,75 mm / 16,37" (additional width when mounted 0 mm / 0")
Height: 527 mm / 20,75" (additional height when mounted 10 mm / 0,39")
Weight: (additional weight when mounted 1,5 kg / 3,3 lbs)

Data:
DMX Channels:
1 or 2 at 8bit:
2 or 3 at 16bit:
Protocol: USITT DMX512-A

Electrical:
Never connect to dimmer power
AC Power: 100 – 240 V nominal, 50/60 Hz
Powersupply: Electronic switchmode
Max. power consumption: 182 W.
This fixture must be connected to ground.

Thermal:
Maximum ambient temperature - t.Amb: 35° C / 95° F
Cooling t.Case (temperature as shown in display):
Below 64° C / 147,2° F Convection cooled
Above 64° C / 147,2° F Forced silent fan cooling
Above 70° C / 158° F Forced dimming
Above 73° C / 163,4° F Forced Lamp Off

Accessories:
Uploader: BBS Software Uploader

Specifications subject to change without notice. For the latest specifications see www.brothers-sons.dk